AMENDMENTS TO THE CLAIMS:

1. (Currently amended) A method of producing p-type Group III nitride compound semiconductor, comprising:

forming a first Group III nitride compound semiconductor layer doped with p-type impurities;

forming a second Group III nitride compound semiconductor layer doped with substantially at least one of no impurities, n-type impurities, and n-type and p-type impurities, such that an amount of impurities in said second Group III nitride compound semiconductor layer is less than an amount of impurities in said first Group III nitride compound semiconductor layer; and

reducing a resistance one of after and ~~or~~ during said forming said second Group III nitride compound semiconductor layer.

2. (Currently amended) A method of producing p-type Group III nitride compound semiconductor according to claim 1, further comprising:

removing said second Group III nitride compound semiconductor layer one of after and ~~or~~ during said reducing said resistance ~~reducing resistance~~.

3. (Original) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein said second Group III nitride compound semiconductor layer has a thickness selected to be in a range of from 1 nm to 100 nm, both inclusively.

4. (Previously presented) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein said second Group III nitride compound semiconductor layer comprises a thickness which is not less than 1nm.

5. (Previously presented) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein said reducing said resistance comprises promoting a diffusion of said p-type impurities in said first Group III nitride compound

semiconductor layer to diffuse from interstitial sites in said first Group III nitride compound semiconductor layer.

6. (Previously presented) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein said reducing said resistance comprises promoting a diffusion of said p-type impurities to diffuse from interstitial sites in said first Group III nitride compound semiconductor layer to said second Group III nitride compound semiconductor layer.

7. (Previously presented) A method of producing p-type Group III nitride compound semiconductor according to claim 1, said reducing said resistance comprises desorbing said p-type impurities from said first Group III nitride compound semiconductor layer.

8. (Previously presented) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein said p-type impurities comprise at least one of magnesium, zinc, beryllium, calcium, strontium and barium.

9. (Previously presented) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein said n-type impurities comprise at least one of silicon, germanium, carbon, selenium and tellurium.

10. (Previously presented) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein said reducing said resistance comprises performing a heat treatment using one of electron beam irradiation, laser beam irradiation and oven heating.

11. (Previously presented) A method of producing p-type Group III nitride compound semiconductor according to claim 10, wherein said heat treatment is performed in one of a vacuum and a hydrogen-free atmosphere.

12. (Previously presented) A method of producing p-type Group III nitride compound

semiconductor according to claim 11, wherein said heat treatment comprises heat treating at a temperature of at least 350°C.

13. (Previously presented) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein said forming said first and second Group III nitride compound semiconductor layers comprises sequentially depositing said first and second Group III nitride compound semiconductor layers in a reaction chamber.

14. (Previously presented) A method of producing p-type Group III nitride compound semiconductor according to claim 13, wherein said forming said second Group III nitride compound semiconductor layer comprises introducing an n-type impurity source gas to said reaction chamber.

15. (Previously presented) A method of producing p-type Group III nitride compound semiconductor according to claim 13, wherein said forming said second Group III nitride compound semiconductor layer comprises introducing an n-type impurity source gas and a p-type impurity source gas to said reaction chamber.

16. (Previously presented) A method of producing p-type Group III nitride compound semiconductor according to claim 13, further comprising:

removing said first and second Group III nitride compound semiconductor layers from said reaction chamber, and subjecting said first and second Group III nitride compound semiconductor layers to a heat treatment of greater than 350°C.

17. (Previously presented) A method of producing p-type Group III nitride compound semiconductor according to claim 13, further comprising:

subjecting said first and second Group III nitride compound semiconductor layers to a heat treatment of greater than 350°C without removing said first and second Group III nitride compound semiconductor layers from said reaction chamber.

18. (Previously presented) A method of producing p-type Group III nitride compound

semiconductor according to claim 17, wherein said subjecting said first and second Group III nitride compound semiconductor layers to a heat treatment comprises thermally decomposing said second Group III nitride compound semiconductor layer.

19. (Previously presented) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein a thickness of said second Group III nitride compound semiconductor layer is no greater than 100nm.

20. (Currently amended) A method of forming a light-emitting diode, comprising:

forming a first Group III nitride compound semiconductor layer doped with p-type impurities;

forming a second Group III nitride compound semiconductor layer on said first Group III nitride compound semiconductor layer such that an amount of impurities in said second Group III nitride compound semiconductor layer is less than an amount of impurities in said first Group III nitride compound semiconductor layer; and

after a beginning of said forming said second Group III nitride compound semiconductor layer, performing a heat treatment to reduce an electrical resistivity of said first Group III nitride compound semiconductor layer,

wherein said second Group III nitride compound semiconductor layer comprises one of no impurities, n-type impurities, and n-type and p-type impurities.